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FIG. 1.

A

diam. 2.3"

B

diam. 2.2 1/2

diam. 2.1 1/2

FIG. 4.
BRICK OF ARCH
OF SOUTH GATE

FRONT

SIDE

FIG. 2.

SIDE
ELEVATION

Excavations on the Site of the Roman City at Silchester, Hants in 1890

George E. Fox, William Henry St. John Hope, Society
of Antiquaries of London, Society of Antiquaries of London

of elevation.

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OF THE
ROMAN CITY AT SILCHESTER, HANTS,
IN 1890.

COMMUNICATED TO THE SOCIETY OF ANTIQUARIES

BY

GEORGE E. FOX, F.S.A., AND W. H. ST. JOHN HOPE, M.A.



WESTMINSTER :
PRINTED BY NICHOLS AND SONS, 25, PARLIAMENT STREET.

1891.

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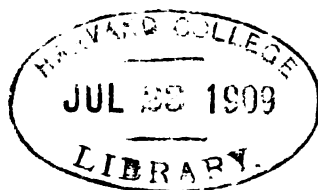


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FROM
ARCHAEOLOGIA
VOL. LII.

EXCAVATIONS ON THE SITE OF THE ROMAN CITY AT SILCHESTER, HANTS.

ON the 27th February last we had the honour of laying before the Society a communication on the desirability of the complete and systematic excavation of the site of Silchester.*

The scheme therein set forth, which had already been sanctioned by the Duke of Wellington, the owner, and by Mr. Cooper, the tenant, met with the cordial support and approval of the Fellows present, and it was unanimously referred to the Council to consider the steps necessary for carrying it out.

The deliberations of the Council were eminently practical, for they not only at once appointed an executive committee to carry out the scheme, but, by the liberal grant of 25*l.* from the funds of the Society, and another 25*l.* from the newly-created Research Fund, they initiated the means by which the scheme could be carried into effect.

A strong and influential general committee was next formed, and, as other subscriptions began to come in, it was decided to commence operations. The executive committee accordingly met at Silchester to inspect the site, and finally resolved that the work should be begun, as suggested in our memorandum, by completing the excavation of the large *insula* north of the *forum*, where the late Rev. J. G. Joyce, F.S.A., had already uncovered the remains of a large house.

This *insula* is surrounded by streets whose width and exact place are clearly marked in the growing crops, so much so that when a portion of these was cut

* See *Proceedings*, 2nd S. xiii 85.

for us to the presumed width of the ancient streets on the north and east sides of the *insula*, to mark the limits of the ground set apart for excavation, the edge of the cutting was found to coincide with the external face of the wall line of the houses. Thus the plan of the streets, as laid down on the 25-inch Ordnance Survey map, may be taken as correct.

On the south side this *insula* is traversed by a modern road, which passes completely across the site of the city from east to west.

When we commenced to lay bare the limits of the *insula*, it was found that a continuous wall marked the line of the streets, although the houses of this *insula*, as will be shown, stood detached from each other.

Within these bounding lines are two large houses, one at the north-west corner, one at the north-east. Signs of another were found on the south, and although the part of the *insula* south of the modern road has not yet been fully examined, enough has been done to show that buildings existed along that side.

Between and south of the houses named extends a considerable area of open ground. This was examined throughout by trenches carried diagonally at intervals of 16 or 17 feet. Between the houses these revealed scarcely anything, no remains of foundations, and but little pottery. The case, however, was different in the ground south of house No. 1. Here there were confused but very scanty indications of buildings lining the street down to the edge of the modern road, and many objects of various kinds were turned up. Two rubbish pits were also disclosed.

The open ground to the south of house No. 2 had many rubbish pits in it, and from them were derived many interesting objects: these will be described presently. House No. 1, at the north-west corner of the *insula*, was excavated in 1864 by the Rev. J. G. Joyce,* who was of opinion that it had been twice altered and partially rebuilt, basing that opinion chiefly on the coins found. After a careful examination of the site, aided by the excellent plans and sections made by Sir Henry Dryden, we are inclined to consider that the house is of only two periods.

The two columns found by Mr. Joyce and described by him are here figured and drawn to scale for the first time. (Plate XXVII., figs 1 and 2.)

After the ground to the south of house No. 1 had been thoroughly searched, a strip 40 feet wide along the north side of the *insula* was next taken in hand. The trenches for some distance east of house No. 1 showed no foundations, and

* See description and plan in *Archaeologia*, xlv. 329, *et seq.*

FIG. 1.

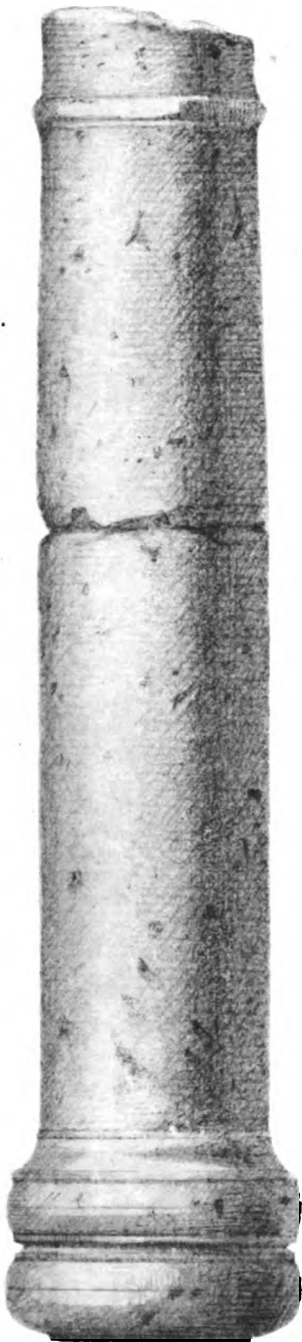


FIG. 3.

(Full size).

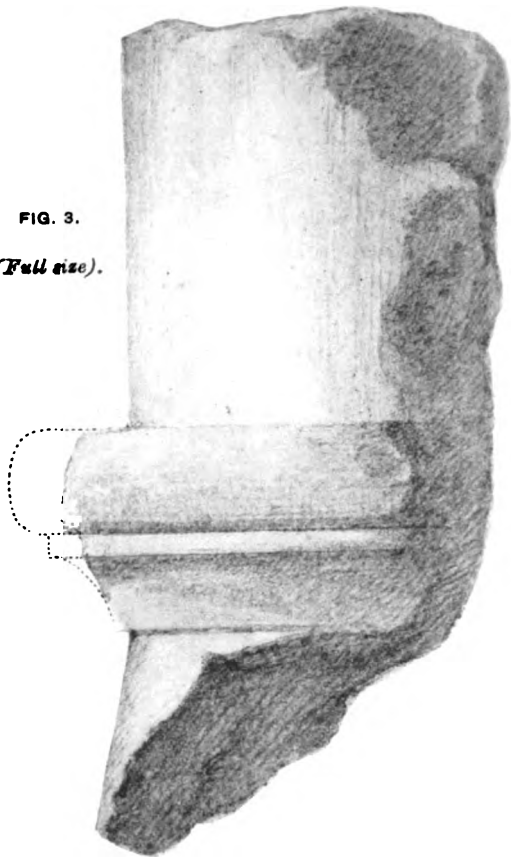


FIG. 2.

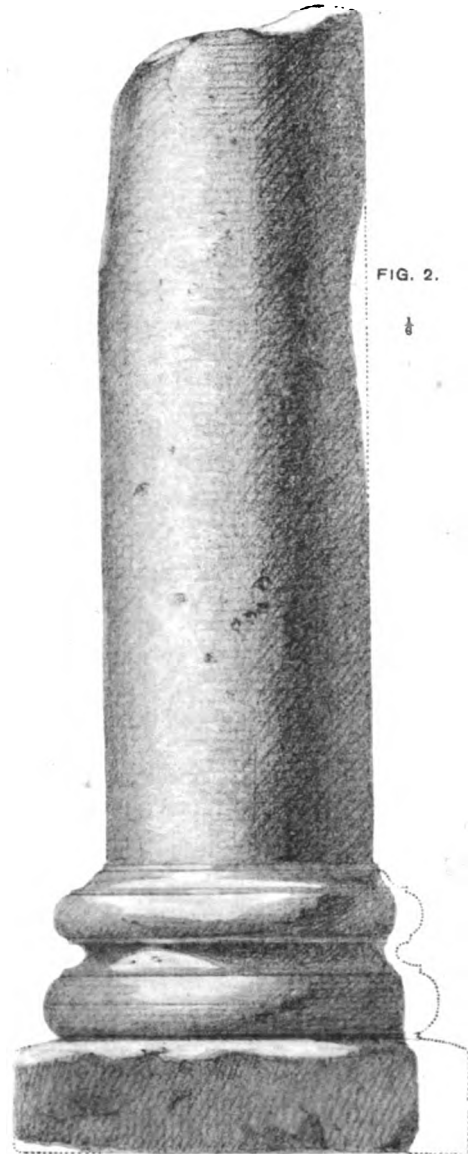
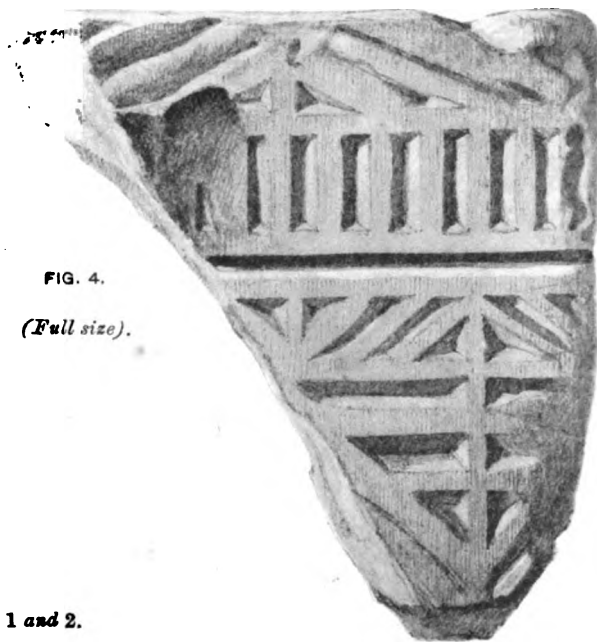


FIG. 4.

(Full size).



Scale to Figs. 1 and 2.

Scale of 12" 9" 6" 5" 0 1 Foot

George E. Fox. del. 1890

produced but few objects. At a distance, however, of 120 feet from the north-east angle, traces of buildings were come upon. These traces were but vague and fragmentary, and no continuous lines of foundations revealed themselves, but here and there occurred the wreck of what had been cemented floors. Three rubbish pits were found amongst them, from one of which (pit C) many pieces of painted wall plaster were unearthed, and a small fragment of a column $7\frac{1}{2}$ inches in diameter.

At this point the excavations were suspended for a time, the work of harvest intervening. They were however resumed as soon as the crops were off the ground, and continued in a southerly direction. They now revealed the lines of a large and interesting house (No. 2), the foundations to the north of it already explored being apparently the remains of its outbuildings on that side.

It will be seen by a reference to the plan (Plate XXVIII.) that this house resembled very much in its general laying out those already discovered, with certain additions and alterations. As in the others, a courtyard with corridors forms a centre round which the ranges of rooms are placed, these again having an external corridor or series of gallery-like rooms.

This arrangement seems the typical one in all the larger houses yet discovered in Silchester.

The alterations in the house before us consist in the insertion of two rooms warmed by hypocausts in the lines of the west and north outer corridors, and in the division of the courtyard by a south corridor or pentice.

Owing to the lesser depth of soil over this house than over No. 1, repeated ploughing had demolished the walls, for the most part, down to the level of the floors, and by the same agency the finer mosaic floors had been almost entirely destroyed. There was clear evidence also that the building materials, of too great a value in such a stoneless country to be left on the site, had been carried away, either to be used again in early times for building purposes, or to be broken up in later days to mend the roads in the neighbourhood. In great measure the plan of the house was recovered from the traces of its floors, where the *tesseræ* lay too deep for the ploughshare to reach.

From the nearness to the surface of what remained of the walls, the flint rubble of which they were composed had become disintegrated by the rains and frosts of centuries, more especially as in many instances the mortar which bound the flints together was by no means of the excellence usually attributed to Roman work.

The walls seem to have been all composed of this flint rubble with brick quoins, and in the best preserved portion discovered, that of the nearly circular

chamber of the western side, the foundations extended to a depth of 2 feet 3 inches from the Roman ground level. The wall proper commenced with a course of tiles, the width of the foundations being 2 feet 6 or 7 inches, whilst the wall they supported was 2 feet 4 inches. The average thickness of the walls throughout the house was 2 feet.

Owing to the demolition of the walls in so many places, it was not possible to trace the doorways; one only, with any certainty, could be marked, that affording means of communication between the south corridor and the inner courtyard at its south-west angle.

It could not be ascertained whether the walls of the house had been plastered externally, but the wall of this courtyard had been thus covered, as some portions of plastering were discovered here and there just above the original ground level. This plastering did not appear to have been painted. Looking at the nature of the material of which the walls were composed, it is very probable that all the houses had such a coating externally, and it is quite possible that in some instances it had a certain amount of painted ornamentation.

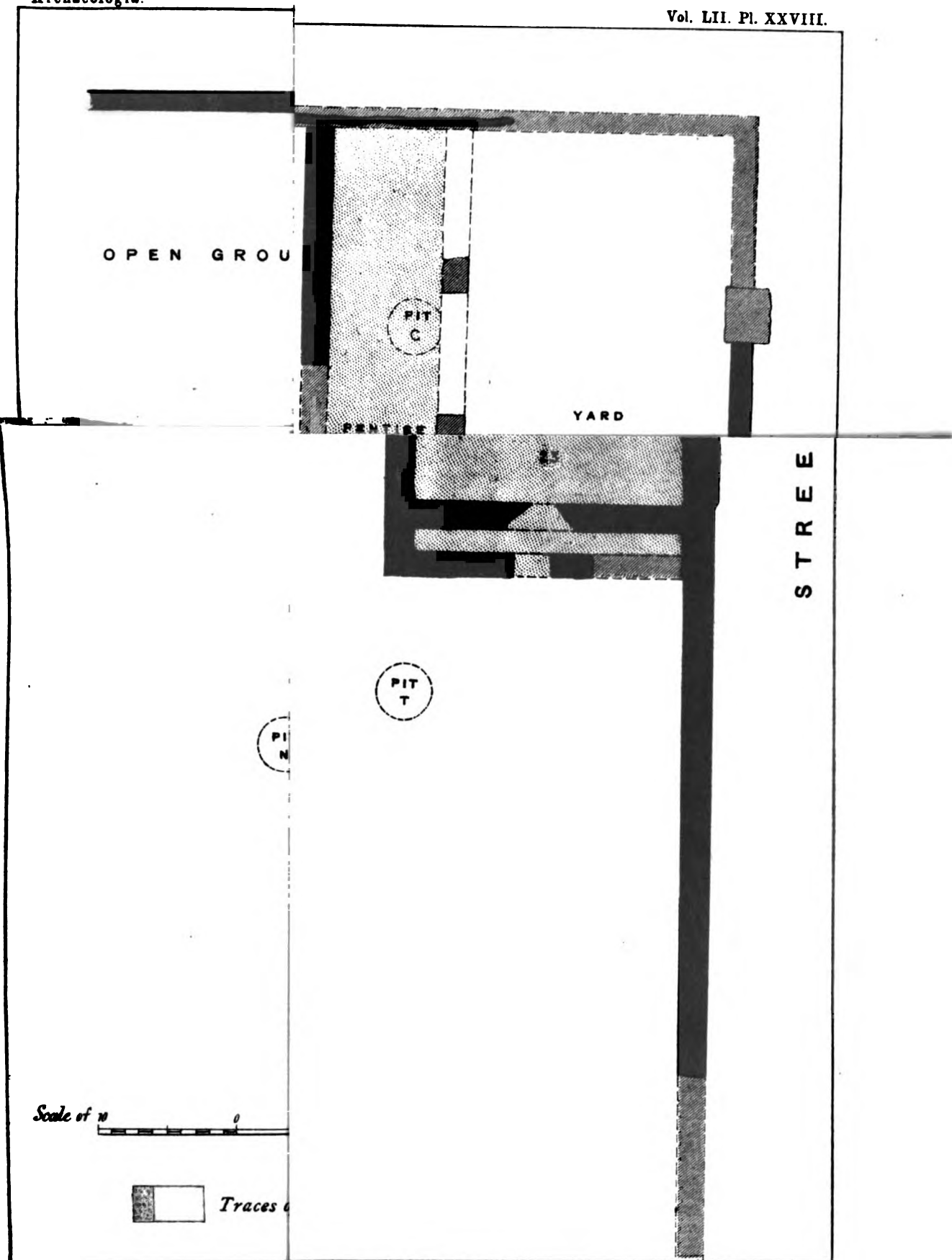
The flooring of the various chambers and passages was very generally of tessellated work, though a portion of the west corridor towards its south end, and a small fragment in the space marked 19, showed pavements of *opus signinum*; or that variety of it at least which is most used for floors, and contains various-sized fragments of brick mixed with the lime which binds them.

The construction of the tessellated pavements followed a scarcely varying rule, and had hardly the solidity usually found in such work. On the earth was laid a bed of coarse gravelly mortar, 4 to 5 inches thick, and upon this a layer of fine *opus signinum*, of the kind made of lime cement coloured with pounded brick, the *tesseræ* of the floors being inserted in this second layer. The thin fluid cement usually run into the joints of the *tesseræ* before the final polishing had quite disappeared, and its place was filled by black vegetable mould.

In the plan (Plate XXVIII.) the portions coloured pink show traces of being covered either by tessellated floors, or by those of *opus signinum*; whilst the grey tint extends over the spaces where the flooring has disappeared, or of which the character is unknown.

The east corridor appears to have been paved with *tesseræ* of a drab-coloured stone, averaging 1 inch square.

The pavement of the north corridor is more elaborate in design. It consists of a groundwork of the drab-coloured stone *tesseræ*, as in the east corridor, with a broad border of red tile *tesseræ* of the same size. In this groundwork of drab



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stone a broad band of red forms a panel extending the length of the corridor. A thin central line of red *tesserae*, with an octagon at the west end and a hexagon at the east formed of black and red lines, completes the decorative arrangement. The figures have small centres in the shape of a cross made of four black *tesserae* with one central white one. The west end of this pavement is shown in Plate XXIX., and may be taken as a typical example of the commoner forms of mosaic pavements found at Silchester.

The passage-way 19, to the external corridor 17, has a flooring of the drab *tesserae* with a bordering of red. Rooms 14 and 18, with the passage between, 16, are paved throughout with the red brick *tesserae*, and the external corridor, 17, was evidently paved with the same kind of flooring.

In the west corridor, at a distance of about 7 feet from its north-west angle, set in a ground of the 1-inch red *tesserae*, occurred a fragment of mosaic work of finer character. This had been laid down, as a Persian or Indian rug is at the present day, before the entrance to the more considerable chambers of the house. It was formed of black and white *tesserae*, the latter ranging from 1 inch to $\frac{1}{2}$ inch in size, and had the figure of an elaborate fret inclosing small panels of braid-work, in which yellow and red *tesserae* were also introduced. How far it extended down the corridor in a southward direction it is impossible to say; but it may have been nearly 20 feet long. Although very much ruined it was possible to make out the pattern, and it owed its partial preservation to the fact that a portion had sunk in a basin-shaped hollow, caused by the subsidence of a rubbish pit beneath (R on plan, Plate XXVIII.), filled up before this line of corridor was constructed. In fact, the east wall of the corridor passed over the side of the pit.

Besides a fragment of coarse drab and red pavement, perhaps the floor of a passage, in the division marked 4, a small piece of a border of delicate character was found in room 2 against its south wall. Here another rubbish pit (P on plan) had caused a sinking of the *tesserae*, and thus preserved a portion of the mosaic. Judging by the fragment remaining, this is part of a small band of chequered work with an embattled edging; the border of a pavement of a superior kind. The colours of the *tesserae* in this band are: black, purple, red, yellow, and white, and the sizes of the *tesserae* $\frac{1}{2}$ inch and under, but in the broad strip of white next the wall they are a full inch in size.

By the kindness of Dr. Woodward, Keeper of the Geological Department of the British Museum, we are enabled to identify with some degree of certainty the materials of which the various coloured *tesserae* are composed. The white

appear to be derived from the beds of the white lias or great oolite; the yellow also seem to be taken from the white lias limestone. All the red *tesserae* are undoubtedly brick, and the purple, which only occur in small numbers in the border in room 2, seem to be a vitrified form of the red *tesserae*. The black are composed of a fine grained calcareous sandstone. The drab, which, with the red, are the commonest of all, are of fine sandstone.

One other little detail connected with these floors may be noticed. At the junction of the east and north corridors, piercing through the wall into the angle of the courtyard, was a pipe partly formed by an *imbrex* tile. It was at the level of the floor, and served to carry away the water after swilling the pavements. A similar arrangement is to be found in the *triclinium* of the villa at Chedworth in Gloucestershire, and in the large room of the villa at Brading in the Isle of Wight.

While treating of the floors an alteration of their levels and an enlargement of the house, particularly on its western side, must be noticed.

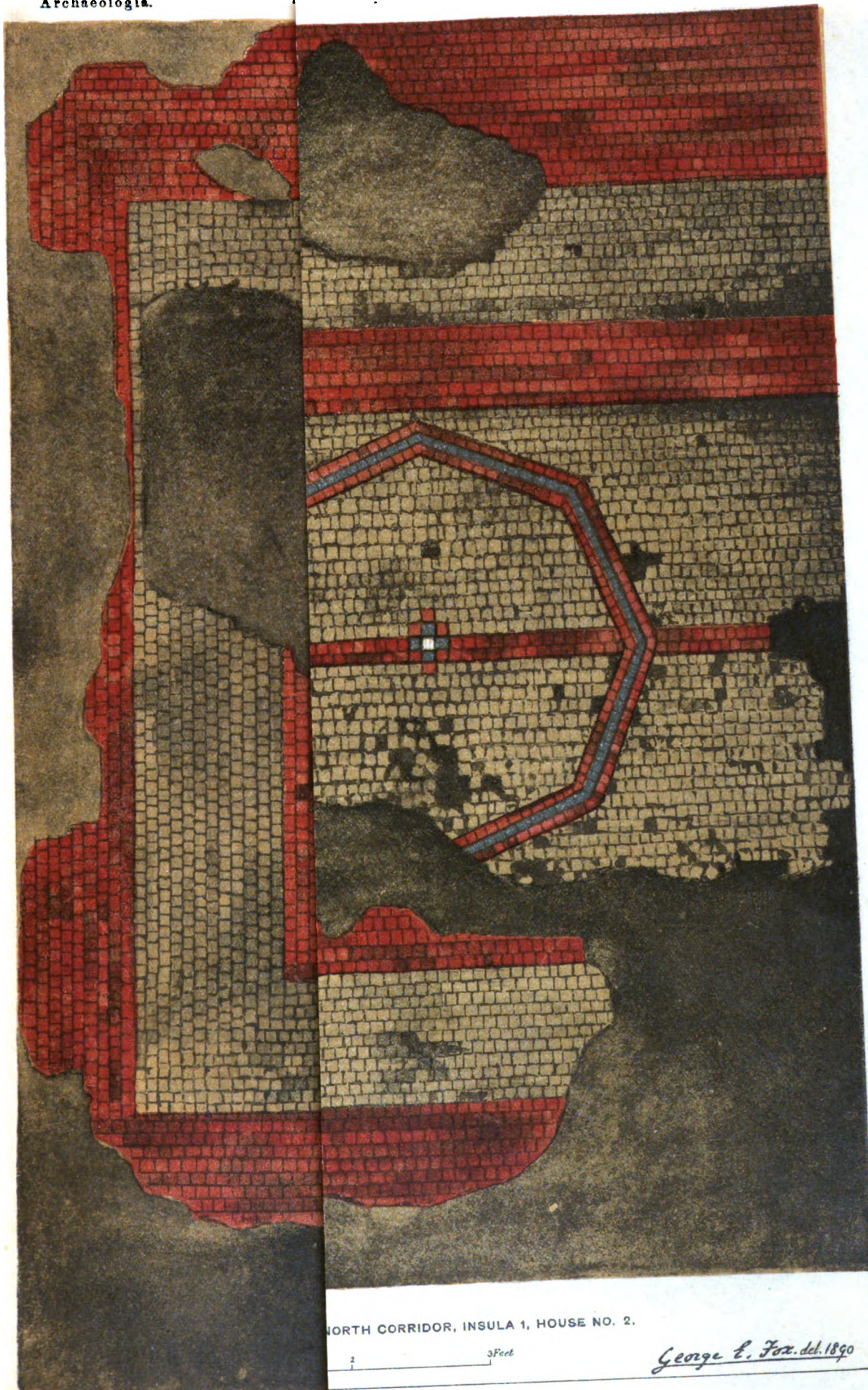
In no less than four separate places was found distinct proof of the existence of a former floor level, lying from 1 foot 6 inches to 1 foot 9 inches below the existing tessellated pavement of the north corridor. These four places were: (1) at the south end of 5; (2) in the centre of division 4; (3) under the black and white pavement in the west corridor; and (4) at the south end of the west corridor near the entrance to passage 3, where a patch of *opus signinum* pavement was still *in situ*. A trench cut through the nearly circular room 1 showed no trace whatever of this lower floor level, and, as the fragment of *opus signinum* pavement did not extend south of passage 3, it would appear as if the southern end of the corridor, and rooms 1, 2, and 6, had been added to the original plan of the house.

At the same time the floor level of this west side of the house had certainly been raised.

Room 7 is clearly of later date, as is shown by its junction with the tile quoin at the south-west corner of room 6. Of the same age as 7, which was warmed by a hypocaust, are also 8 and 11, both winter rooms with hypocausts, and their stokeholes 9 and 12.

The hypocausts of rooms 7 and 8 are of the composite kind, that is, formed partly by walled channels in the ground, partly by rows of *pilae*.

A noticeable feature here is that both chambers were served from the same furnace room or stokehole 9, an arrangement by no means common, though instances have been known in Britain. An excellent example may be seen in the



NORTH CORRIDOR, INSULA 1, HOUSE NO. 2.

2 3 Feet

George E. Fox del. 1890

villa of Marienfels, near Wiesbaden. The same arrangement may also be noted in house No. 1 of this *insula*.

The pillared hypocaust 11, with its furnace room 12, traverses the long external corridor of this side of the house.

Another, but composite, hypocaust has been intruded into the external corridor on the north side. The marks of its intrusion are very evident, for in constructing it part of the tessellated flooring of the passage has been left in place, thus showing that the corridor is of earlier construction than the hypocaust. Some fragments of masonry against the north wall of 14 show the steps up to the room above this hypocaust.

Burnt flooring may be a sign of the existence of hypocausts constructed to warm rooms in the space marked 5, but all this division of the house is too ruined to be made out.

In every part of the excavations of this house painted wall plaster was met with. From a careful examination of the fragments turned up it appears that, for the most part, simple panelled work formed by lines in different colours on variously coloured grounds formed the principal ornamentation of the walls; reds and yellows, derived from the ochres, being the prevailing pigments employed. At the same time the decoration of the principal rooms was not confined to mere lines of one colour on another coloured ground, as the painted fragments show, especially in rooms 1, 2, 11, and 15. Here traces of painted ornamental forms were found, including golden-coloured draperies and imitations of yellow and grey marbles, no doubt suggested by the marble wall-linings of important buildings.

One interesting architectural fragment was turned up in the hypocaust 11 (Plate XXVII., fig. 3). This was a piece of the neck and astragal of a Doric capital with a portion of the shaft beneath it, $6\frac{3}{4}$ inches in diameter, and evidently belonged to one of those dwarf baluster columns which are occasionally met with on Roman sites, the prototypes of the baluster shafts of the primitive Romanesque. As before mentioned, a small fragment of a column, giving a diameter of $7\frac{1}{2}$ inches, was found in the rubbish pit C in the dependencies of this house.

Not far from 11 was also picked up a portion of one of those ornamented wall-flue tiles, with reeded ornamentation stamped upon it, which must have formed part of the wall decoration of one of the winter rooms. (Plate XXVII., fig. 4.)

Of the superstructure of the house but little could be learned. Of the glazing of its windows only four fragments were found, and these were all dug up in the

small square room 21. The trenches throughout the *insula* produced a certain quantity of window glass, but not large in amount.

It is impossible to suppose that so important a house as this had not many windows, and that they were not glazed. The principal rooms must have been amply lighted. The mosaic floors and the rich wall-colouring required proper lighting for their display. It is probable that the windows were small and undoubtedly high in the walls, but made up for their smallness by their number.

The entrance to the house from the street may be assumed to have been opposite room 21, which room would have served for the porter. A recess in the wall here contained either a closet or a seat, probably the latter.

The use of the spaces south of room 21 cannot be determined; but the long strip between 22 and 23 may indicate the position of a staircase, if the house had a first floor, which is very doubtful. These end rooms are, perhaps, additions to the original plan.

The great square foundation south-west of this group of chambers has much the appearance of a large tank for the storage of water from the extensive roofs; but the fact that it showed no traces of being lined with the usual cement or paved in any way militate against this idea. A deep rubbish pit, too, in its north-west angle, the earth of which was much stained and blackened, would also be an objection to this assignment.

The south corridor of the house was apparently added to the original design to afford more direct access from the street-entrance to the principal rooms. It was probably open on its southern side with a pentice roof only. Something of the same arrangement may be seen at the north-east angle, where a yard with entrances from the street gave access to the dependencies. There the stone footings for the support of the posts remain.

Traces of the destruction, or partial destruction, of the house by fire were to be seen on the mosaic pavements, notably along the north corridor, and upon the fragment of black and white tessellated work at the north end of the west corridor.

The extremely ruined state of the north and great part of the west side make it impossible to guess the uses of the different rooms. One of the finest of these must have been the partly circular one terminating the west side. It seems likely that the wall crossing it lay beneath the surface, and served only as a support to columns, so that rooms 1 and 2 formed one large apartment with a fine mosaic floor in the square division. It is not singular to find rooms terminating in apses, but the form of room 1 appears to be very rare in Britain.

We now turn to the subject of the trenches and rubbish pits, and the objects found in them. As has been already said, the whole of the ground north of the modern highway and clear of the two large houses was systematically examined by trenches carried diagonally across the area at intervals about 17 feet apart.

Wherever foundations or traces of masonry occurred the trenches were extended in order to ascertain their nature. By these means were disclosed the rubbish pits noted on the plan, but it is possible that over so large an area a certain number may have escaped observation, and that other wells than one found towards the south-east corner of the *insula* may also have been missed.

Various objects were turned up in the trenches, but the pits were the principal source from which the better preserved relics were derived. These pits were generally about 4 feet in diameter at the bottom, but spreading irregularly towards the top, and their depth from the Roman ground level did not exceed 6 feet on the average. They were simply holes dug in the ground. Their contents included fragments of bones of domestic animals, and shards of all the varieties of pottery found on the site, especially of the commoner sorts. Occasionally objects in bronze or glass or iron occurred, but these were more frequently met with in the trenches.

Owing to the fragmentary condition of the bones, but little information could be derived from them. Dr. Woodward has, however, identified bones of the horse, ox (*bos longifrons*), sheep or goat, of the pig, which was very abundant, and the dog; and among the wild animals, the red deer, roebuck, and perhaps fallow deer. Oyster-shells were discoverable all over the site.

Besides the three pits already noticed at D, C, and E, two others, which must have been of early date, were found in house No. 2.

These had been covered by tessellated floors, and walls ran close beside them, or even partly over them. One pit, R, occurred at the north end of the west corridor. In it were found two *fibulae* of bronze, and various small objects of the same metal; fragments of glass vessels; shards of reddish brown ware, and of pseudo-Arretine, both plain and figured; some pieces of a very fine black ware; and several skulls of dogs.

The other pit, P, lay beneath the patch of good mosaic in room 2. It was about 9 feet deep from the floor of the room and from 2 feet 10 inches to 3 feet 10 inches in diameter. The foundations of the wall which ran on its southern side had given somewhat from the subsidence of the earth with which the pit was filled. Near the bottom lay two pots, one of not uncommon type, the other

coarse and hand-made. The clay of which the latter was formed contained many grains of white pounded flint, and was of a dull buff colour, with a smoked and blackened surface. A good many fragments of painted wall plaster lay nearer the surface, and a copper coin of Nero was also turned up.

But the pit N produced the most remarkable collection of antiquities yet discovered in this *insula*. This was a mass of iron objects, mixed with a few others of different material, forming such a find as is known to have occurred only once before in Britain. When opened, the pit appeared to have been roughly walled with large flints laid in alternate layers with yellow gravel. This lining of flints and gravel was over 2 feet thick. At a depth of 5 feet from the present surface of the ground lay what appeared to be a sword-blade broken in two, and two iron bars, whose modern look led to doubts as to their Roman origin.

On the following day however, when the work of emptying the pit was resumed, it became evident that these formed only a small instalment of an extraordinary mass of iron objects, all in the same wonderful state of preservation. There was now no doubt of their Roman character, for amongst the uppermost lay a perfect bronze Roman scalebeam.

In all there were nearly sixty objects, including axes, hammers, gouges, chisels, two plough coulter, an anvil, a pair of blacksmith's tongs, two files, a rasp, a so-called hippo-sandal, a standing lamp, a gridiron or portable cooking-stove, a carpenter's plane, and sundry objects of doubtful use. The only find similar to this was made in January 1854, at Great Chesterford in Essex, by the late Lord Braybrooke, who discovered in a pit there no less than ninety-six articles of the same period, many identical in character with those found at Silchester.^a

Immediately beneath this mass lay, uninjured, in a sort of cist of pieces of chalk, a vessel of rough grey ware, which originally had a small handle. It contained nothing but a little earth and water, and the purpose of its careful deposit is not apparent. Under it, broken in fragments, was a large jug of coarse buff-coloured ware, much blackened on one side.

Before passing to other matters it may be as well to notice the rarity of some of the contents of this find. The museums of Europe contain but few examples of the plane in use in Roman times. Two specimens are preserved in the National Museum at Naples, and a few other examples may be found in the museums of different towns on or near the Rhine.

^a *Archaeological Journal*, xiii. 1.

Again, the British Museum cannot show any scalebeam so absolutely perfect as the bronze one from this pit. Like some of the smaller specimens in the Museum, it is graduated along the upper edge, for use perhaps as a measure of length.

Both the gridiron and the lamp are also of very rare occurrence.

It has already been noticed that only one well has been discovered. It was 21 feet 5 inches deep from the field surface, and had been lined with oak boards throughout, which remained nearly perfect for a height of about 10 feet from the bottom. The boarding formed a square 2 feet $4\frac{1}{2}$ inches across, dovetailed together at the corners, and braced with narrow diagonal pieces across the top corners of each layer. The boards varied in width from 9 to 18 inches and were nearly 3 inches thick. The whole framing was supported on an oak curb $7\frac{1}{2}$ inches deep. The entire framing was backed by a thick pugging of clay, which was twice as thick on two of its sides as on the other two.

In emptying this well three fragments of the stone cover were found, showing that it had a circular opening $16\frac{1}{2}$ inches in diameter. There were also in it a vase of dark grey ware, three small fragments of glass vessels, and a small piece of the leather of a sandal or shoe. At the bottom of all lay the remains of the wooden bucket, which had been 1 foot in depth, $8\frac{1}{2}$ inches across the bottom, and somewhat wider at the top. It had an iron handle, the greater part of which remains, but of the hoops hardly a trace was discoverable, although the marks of them were plainly visible on the wood.

Near the fragments of the bucket lay a number of pieces of birch bark, and a small shallow bowl of soft white metal, possibly pewter, having a hole drilled through the bottom. Its use is uncertain.

Besides the many fragments of the bones of animals found in cutting the trenches, the skeletons of two infants were discovered. One of these was found in a pit at a depth of 3 or 4 feet beneath the present surface, and appeared to be that of a child of a year old. The bones of the second were unearthed a little to the west of the detached square building south of house No. 2, and had been placed in a small urn of black ware which was deposited at a depth of 2 feet from the present surface. In both cases the skeletons were imperfect, all the smaller bones having perished.

Similar instances of infant burial in the close vicinity of houses are noted by the late Lord Braybrooke in his exploration of the sites of Roman buildings at Chesterford and Ickleton in Essex, and particularly at Barton in the same county.*

* *Archaeological Journal*, vi. 21, 22.

The only other human remains brought to light consisted of a fragment of a human skull dug up in tracing the line of buildings on the south side of the *insula*.

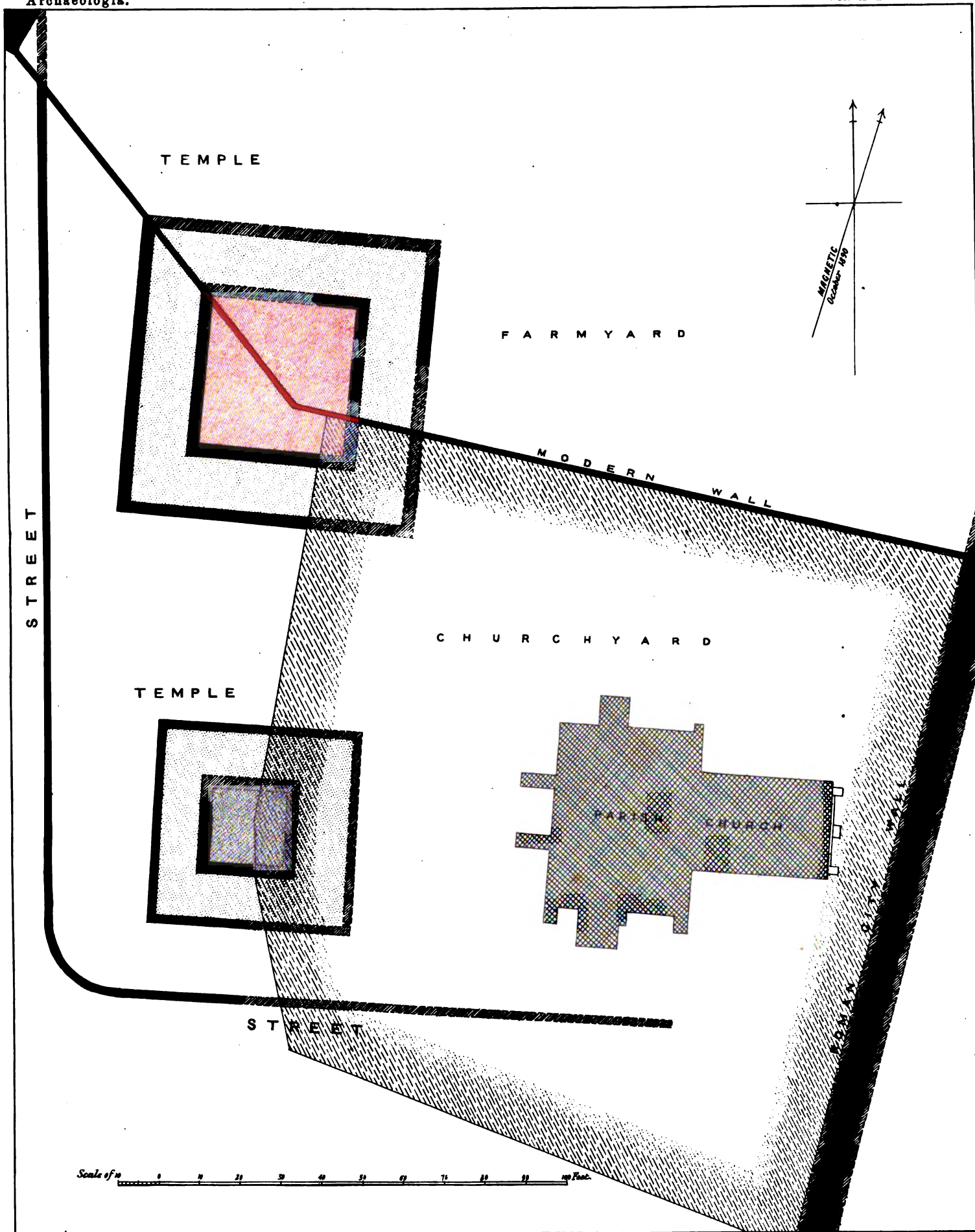
The coins, the many small relics in bronze, the fragments of glass vessels, the articles in bone and Kimmeridge shale, and the pottery in all its varieties, together with the iron objects, afford ample material for a separate paper on a future occasion.

We have already mentioned the suspension of operations in the *insula* until the removal of the crops. This interval was employed in a thorough examination of the north, south, and west gates, and of some interesting features of the city wall. The *basilica* was also very thoroughly re-examined and additional facts respecting it brought to light. As we hope next year to deal with the *forum* in the same manner, and to excavate the remainder of the area in which these buildings stand, the description of the *basilica* and *forum* will very properly form the subject of a separate communication.

Shortly after the resumption of the excavations at the beginning of September, a trench was cut outside the south-west corner of the graveyard of the parish church of Silchester (which stands within the city walls close to the site of the east gate) for the purpose of finding the line of one of the main streets running east and west. Almost the first blow of the pick struck upon a wall, which when cleared proved to be 2 feet thick, and running east and west. On the east it was traced nearly as far as the churchyard, under which it continues, and, of course, cannot be followed. From the churchyard boundary the wall was traced westwards for about 40 feet, when it began to curve round as if to form an apse. When, however, half a semicircle had been cleared, instead of continuing the curve the wall again became straight, but at nearly right angles to its first course, and it was now evident that the curve was simply the rounding of a corner. Two men were accordingly set to trace the wall northwards, but, after following it uninterruptedly for over 200 feet, further progress was stopped by farm buildings under which the wall passed.

Although little more than the lowest courses remained the wall had evidently been well-built of flint with continuous bonding courses of tiles. Where it passes under the churchyard it is higher than elsewhere. Throughout the length uncovered there appeared no signs of any openings or doorways, nor were any cross walls or remains of buildings found. There was no doubt, therefore, that the wall was that of an enclosure bounded by streets on the west and south.

To ascertain what the wall enclosed trenches were cut across the narrow space



W. H. St. John Hope, mens. et del.

SILCHESTER.—TEMPLES NEAR EAST GATE.

between it and the churchyard. These brought to light two rectangular buildings, one in the south, the other in the north part of the area, separated by a distance of almost 50 feet. (See Plate XXX.).

The southern building was 50 feet along its west side; but its north and south walls could not be followed for more than 28 feet as they then passed under the churchyard.

The northern building was larger than the other. Its west wall was followed northwards for about 70 feet, when further progress was stopped by farm buildings. Its south wall was also traced for about 45 feet until it reached the churchyard, under which it passes.

The walls of the southern building remain to a height of about 3 feet; they are 2 feet in thickness and built of flint, but the north-west angle is constructed of tiles. In many parts, notably on the north side, there remained a good deal of the original external plastering. This consists of (1) a coating of white plaster $\frac{1}{2}$ inch thick laid on the flintwork; over this is (2) a second coating of white plaster $1\frac{3}{4}$ inch thick, and painted a bright red. Within the building, and evidently enclosed by it, was found another. Its walls were 3 feet thick, and apparently concentric with the outer walls, but only one angle, the south-west, could be uncovered, two others being under the graveyard, and the fourth beneath large elm trees. The space between the inner and outer walls was about 10 feet wide, filled in with a thick layer of clay and sand, but the inner inclosure contained merely loose building material.

Concerning the northern building fortunately more could be learned than the other. Its outer walls were 3 feet thick, and admirably constructed with a strong foundation of flint and concrete, on which were plainly visible the mortar-beds of the supervening bonding courses of tile. Their height above the original ground level was about 5 feet, but where the south wall passed under the churchyard, owing to the greater depth of soil, it stood much higher. This part, however, in contrast to the excellent work of the lower courses, consisted of poor rubbly material like certain rebuilt portions of the *basilica*. It seemed, therefore, that reconstruction had taken place here also, especially as the tile-courses which certainly formed part of the earlier work are absent in the later. The lower part of this south wall retained considerable portions of its external plastering, painted a bright red, as in the other example.

Like its southern neighbour, this northern building enclosed another, with walls of the same thickness and good construction, and similar traces of the tile-beds.

The space between the inner and outer walls was nearly 13 feet wide and filled in with sandy clay and loam, that in the south-west part being of a peculiar grey colour. Upon this had been laid, at a height of $7\frac{1}{2}$ feet above the original ground level, a pavement of common *opus signinum* 2 inches thick, made of coarsely-pounded brick embedded in hard white cement. Below this was a thin layer of the hard pink cement.

The inner building had been filled in with clay, and paved at the same level as the other with *opus signinum* of peculiar character. This was about 5 inches thick and consisted (1) of a hard concrete of lime with lumps of brick, upon which was (2) a finer layer 2 inches thick, formed of fragments of brick mixed with pieces of hard stone, the most conspicuous being a streaked limestone of a dark colour, seemingly from the Purbeck beds. The upper surface had been ground down level and then smoothed and polished.

On laying down on the plan the walls of this northern building which were first uncovered, it was evident that only a small part of it lay under the churchyard, and that it might be possible to trace it further in an open space on the north between some of the farm buildings. A visit to the farmyard not only showed the practicability of this, but in the sides of a disused sawpit there was already exposed a section of the wall of the inner building which had been cut through in making the pit. It was also so near the surface that the finding of the north-east angle was an easy matter, and a cross trench soon revealed the line of the outer wall.

From these additional data it is possible to recover the character and plan of the building.

It consisted (1) of a platform 73 feet square and $7\frac{1}{2}$ feet high, on which stood, centrally placed, a chamber or *cella* about 42 feet square without and 36 feet square within.

From analogy the southern structure has been similarly completed on plan as a platform 50 feet square, with a *cella* 24 feet square outside and 18 feet square within.

The walls of the *cellæ* of both buildings are carried down to the same depth as the retaining walls of the platforms, and the space between them was filled, as before mentioned, with clayey sand to sustain the pavements of the platforms.

No doorways or other openings were found in any of the walls of these two buildings that could be uncovered.

On the north side of the southern building, a little above the ground level, there seemed to be a sort of layer of red plaster, but in too rotten a state to

justify the suggestion of its being a floor or pavement. Here, too, were found many one-inch *tesseræ*, both red and drab, but principally the latter. Several pieces of worked Purbeck marble were turned up; some from their thinness were evidently wall-linings, but one appears to have formed part of a paving-slab. These marble fragments were found near both buildings. Among the smaller objects discovered were several pins of bone and bronze, an iron stylus, a piece of pseudo-Arretine ware stamped with a rosette, part of a small bone comb, a coin of Valens, another an imitation of Tetricus, and two small lamps of terra-cotta.

As to what the buildings were, it is difficult to say with certainty. Most probably they were temples, as buildings have been found in Gaul of similar or nearly similar plan undoubtedly devoted to the service of the gods.

The thinness of the retaining wall of the platform of the southern building precludes the idea that it supported columns, but the similar wall of the northern one is sufficiently broad to have carried columns forming a peristyle all round the *cella*, which in this instance had apparently no vestibule. Of steps ascending to the *cella* of either temple there were no traces. They would have indicated the position of the doors, which were possibly on the eastern side, though according to Vitruvius the entrances should have been on the west. The roofs of the buildings were unquestionably of wood, the walls being too thin to have supported vaulting of any kind.

That the buildings were of some importance is shown by the brilliant colouring of the sides of the platforms, and still more so by the use of marble wall-linings and pavements. Amongst the surrounding rubbish we also found fragments of what appeared to be the mouldings of plaster panels covered with a fine white stucco, which may have formed part of the decoration of the walls. The curious groovings on some of the pieces were not artificially produced, but are solely due to the action of fine rootlets of the trees growing above them.

Though these buildings, thus curiously grouped together, have both been discovered at the same time, it does not follow that they are of the same date. The smaller may possibly have been of earlier construction, superseded at a later time by the more elaborate and richer structure to the north of it. It may be interesting to compare these constructions with similar ones in France, for it is to ancient Gaul we must look to find such remains of the Roman time as will throw light on those of the same period in Britain. For instance, the ruins of a temple at Izer-nore (département de l'Ain) exhibit a *cella*, rather oblong than square, surrounded by a peristyle, the columns of which stood on a lofty base or *podium*. The *cella*

had no vestibule, and access was obtained to it by a flight of steps on the east, on which side was the door. A temple of the Doric order at Saintes appears to have been arranged in much the same way.^a

Again, a temple discovered at Champlieu (département de l'Oise) had a *cella* nearly square, 21 m. by 20 m. adorned with attached half-columns. It was raised on a *podium* 1 m. 80 cent. above the level of the little court in which it stood, and its entrance was on the east. This temple was probably dedicated to Apollo.^b

But the discoveries of the Père de la Croix, in 1880, on the heights adjacent to the city of Poitiers have more in common with those made at Silchester this year than those just cited. At a spot in cultivated land, above the station of the railway from Paris to Bordeaux, on the borders of the Faubourg de la Roche, was discovered a fosse inclosing a space of an irregularly oval form. Within this fosse, and nearly in the centre of the space marked out by it, lay foundations which were found to be those of two buildings, each about 12 m. 50 cent. square, with smaller squares within them. In the opinion of their discoverer, certainly one, if not both buildings were small temples, an opinion supported by their likeness in plan to the undoubted examples cited, and by a subsequent discovery. These two buildings were 39 mètres apart, but were joined together by constructions showing the traces of a kind of portico. The entrance to both was on the east, and the southern one was evidently the older, the portico and the northern building being clearly additions of a later time. Other substructions were revealed within the ring made by the fosse, and at the same time a well, 38 mètres deep, was found in a walled inclosure. On the well being emptied of the soil which choked it, among many other objects brought to light was a bronze vase of good workmanship, bearing (according to the Père de la Croix) a votive inscription to the god Mercurius Adsmerius, one of the divinities of the Gauls identified with Mercury.^c It may be noted as curious, that three out of the four temples here cited have their entrances on the eastern instead of the western side.

Reference to the plan will show that the two buildings at Silchester, the axes of which are nearly, but not quite, in the same straight line, do not stand parallel with the west wall of the enclosure, which runs almost true north and south. The southern temple is, however, almost exactly parallel with the south wall of

^a For both examples see *Rudiment d'Archéologie, ère gallo-romaine*, of M. de Caumont, and for the temple at Saintes, *Antiquités de la ville de Saintes*, by M. le Baron Chaudruc de Crazannes.

^b See *Ruines de Champlieu*, by M. Viollet-le-Duc, *Revue Archéologique*, tom. 1. N.S. 1860.

^c See *Mémoires de la Société des Antiquaires de l'Ouest*, tom. X. deuxième série, 1887.

the enclosure, which is not quite at right angles with the west wall, and the setting out must, therefore, have been from this south wall, and not from the other.

It is worthy of notice, that the ancient parish church of Silchester, the oldest parts of which are apparently of late twelfth century work, does not stand symmetrically with any of the four sides of its surrounding graveyard, but its axis is exactly parallel with that of the southern temple. This may be merely a coincidence, but it is also possible that the Christian temple may be founded on some earlier building of the same date as that to the west of it. Unfortunately, nothing further can be done to investigate the matter.

The eastern side of the churchyard is bounded by the city wall, the core of which, in fact, here forms the greater part of the fence.

Before passing to the description of the gates it will be as well to say a few words about *opus signinum* floors, which it will be remembered were found in the large house previously described, as well as in one of the temples. Pieces of such floors have also been met with in the *basilica*.

Opus signinum, or the variety of it used for pavements, has scarcely attracted the attention it deserves. Floors of this material, composed of small pieces of brick, together with tiny fragments of volcanic ash, the whole bound by a lime cement, are of as common, if not commoner, occurrence in Pompeii than those composed of tessellated work. Nor are they confined to the meaner rooms of the houses there; very frequently the composition named forms a ground in which are bedded lines of white marble *tesseræ* arranged in elaborate geometrical patterns. The more usual method, however, when it was determined to enrich such a floor was to embed in it, in quite irregular fashion, any small fragments of the much prized varieties of marbles or rare alabasters. Pieces of pavements of the rarer *opus sectile* are thus used up again, the broken fragments of the flat tile-like hexagons, circles, and squares, of which they were composed, being embedded in the mass of the floor.

It is interesting to see that this same method has been employed in the pavement of the *cella* of the northernmost temple at Silchester. The rare marbles and alabasters of the Pompeian floors were of course not to be had, but the only marble apparently known, or at least procurable at the time, has been used, and fragments from the Purbeck beds are found incorporated in the floor. The pavement of the peristyle is of the commoner kind of work finished with a coating of lime cement, and contains no marble.*

* The pavement of the *cella* of the Doric temple at Saintes, in France, had a floor precisely similar to that of the peristyle of the larger temple at Silchester.

Pavements of *opus signinum* have scarcely as yet been noticed in Britain. If mentioned at all, they have been simply described as "cement floors," attention only being directed to tessellated work; but they deserve to be carefully noted wherever found, as they were by no means despised by the Roman builders, and formed a class of pavement as distinct as that of the more precious *opus tessellatum*, or still more prized *opus sectile*.

Pending the time when operations could be resumed after harvest in the *insula*, as no part of the area within the walls was free from growing crops, attention was directed to a proper examination of the city gates.

Three of these, on the north, south, and east, and another of lesser importance on the north-east leading to the amphitheatre, were partly investigated by Mr. Joyce. but the north and south gates were the only two that had not been entirely covered up again. These were now taken in hand and thoroughly worked out.

The site of the west gate had been approximately known, but the gate itself had not been previously explored. This has now been completely excavated, so far as the modern highway which passes over part of it permitted, with most interesting results.

The east gate and north-east postern have not yet been re-examined.

It will be convenient to commence with a description of the north gate.

This is situated nearly in the middle of a short section of the city wall, about 125 feet long, and now from 7 to 12 feet high, which bounds the area on the extreme north. (Plate XXXI. fig. 1). The gate is not flush with the wall, but is set back 24 feet, and flanked on each side by an inward sweep of the curtain wall, overlapping the gate proper by about $8\frac{1}{2}$ feet before abruptly ceasing. There is thus formed in front of the gate a restricted area, narrowing rapidly from about 36 feet to 22 feet, and then more gradually to 19 feet immediately before the gate. By this means an enemy was placed at a great disadvantage when attacking the gate, the flanking walls enabling a small defending force to repel the attack without unnecessarily exposing themselves. The flanking walls, which alone retain their external facing, are well built of alternate bands of flints and large blocks of ironstone. They have also chamfered plinths of 6 inches projection of the same ironstone.

It will be noticed that while the eastern flank is parallel with the axis of the gate, the western side forms an angle with it. This may be due to some change of design while the wall was being built, as we found indications of this western flank having originally begun to turn in some feet before where it now does, as if

to form a wider gate. The inner face too follows the curve inwards of the outer line; while the eastern flank, though rounded on the outside sweep, has a decided right angle within.

The bastions formed by the return of the flanking walls, with the mound there backing them, would afford ample space for the largest military engines to defend the approaches of the gates, while the large platform over the gate itself would enable the defenders to pass from one side to the other.

An excellent representation of the manner in which the gates of cities and walled camps were defended by *ballistæ* may be seen in Plate 45 of Bartoli's work on the Trajan Column.

That *ballistæ* were used in Britain is certain, for in the large camp of *Bremenium* (High Rochester), to the north of the Roman Wall, two inscriptions were found in 1852 and 1855 respectively, recording the erection there of a *ballistarium*, that is, a battery of *ballistæ*. One of these inscriptions was discovered outside the west gate, close to which is a broad platform extending along the camp wall, no doubt the *ballistarium* in question.

To return to the north gate of Silchester.

The gate itself, which was a single one, consisted of two nearly parallel walls, about 18 feet long and 4 feet thick, built within the flanks formed by the inward turn of the curtain wall. They were from $12\frac{1}{2}$ to 13 feet apart, and carried an inner and an outer arch, each about 11 feet wide and $2\frac{1}{2}$ feet deep. The doors, which, as usual, were double, were placed immediately behind the outer arch. The pivots on which they turned did not apparently work in stone sockets, but in the ends of a wooden sill, 10 inches square and 16 feet long, embedded in the threshold, seemingly at the time when the gate was built. Attention was first called to this rare and interesting arrangement by our clerk of the works, Mr. Richard Mann, who carefully cleared out the well-preserved holes in which the ends of the timber had been laid.

The only other place where such a feature has, we believe, been noticed in Britain is the Roman station of *Garianonum* at Burgh-by-Yarmouth, where the east gate, when excavated in 1855 by the late Mr. Henry Harrod, F.S.A., was found to have had a wooden threshold 15 inches square.*

The reason for using timber seems to have been the same, both at Silchester and Burgh, viz. the absence of stone in the district.

Whether any, and what, steps were taken to increase the durability of the wood in such a position we do not know.

* *Norfolk Archaeology*, v. 152.

In what manner the upper sockets of the door pivots were fixed, or how the passage of the gate was covered, whether by a wooden roof or a barrel vault, unfortunately cannot be said, as the whole of the superstructure is destroyed, and little more than the base of the gate is left.

Although the soil was entirely removed on both sides and within the gate, no traces of guard chambers, or, in fact, any buildings whatever, were met with. No architectural or other remains appear to have been found here by Mr. Joyce, save the fragments of two drums of columns, one 2 feet 9½ inches, the other 3 feet in diameter, both much mutilated.

Our own investigations within and without the gate have brought to light no additional fragments. We had, however, no opportunity of excavating in the ditch, where such remains might possibly be found, nor have we yet ascertained how the ditch before the gate was crossed.

On each side of the north gate, and at equal distances from it, may be seen two of the curious buttress-like projections on the inner face of the wall, which may be found at intervals along its whole course. (See plan, Plate XXXI.) In both cases, and in a third example not far from the east side of the south gate, these have been partly uncovered. They are broad pilasters, 12 feet across, formed by carrying up the full thickness of the lower part of the wall. This is set back between them 2 feet throughout its circuit, the lower part serving as a deep plinth. The average distance apart of the pilasters is about 200 feet, but by the north gate the interval is only 100 feet. The entire thickness of the wall, less its external footing, is 9 feet 9 inches.

The question as to the object of the projections requires further study, and will more conveniently be deferred until there has been time and opportunity to make a thorough examination of the city wall throughout its entire course.

Concerning the south gate, which has already been described by Mr. Joyce in vol. xlv. of *Archaeologia*, little need be said.

It closely resembled the north gate in plan and dimensions, but is set back from the front of the curtain wall 28 feet instead of 24 feet, as the north gate is. (Plate XXXI., fig. 2.) The flanking walls, therefore, though of the same length as those at the north gate, here overlap by only 39 inches, and it is by no means clear how there could be easy and uninterrupted passage from one side to the other across the gate. Mr. Joyce was not able to satisfy himself whether or no there were guard chambers to this gate, but we have fully ascertained that, like the north gate, it had none. There is, however, a rude foundation parallel with the west wall of the gateway, which may have supported a flight of steps having

Archaeologia.

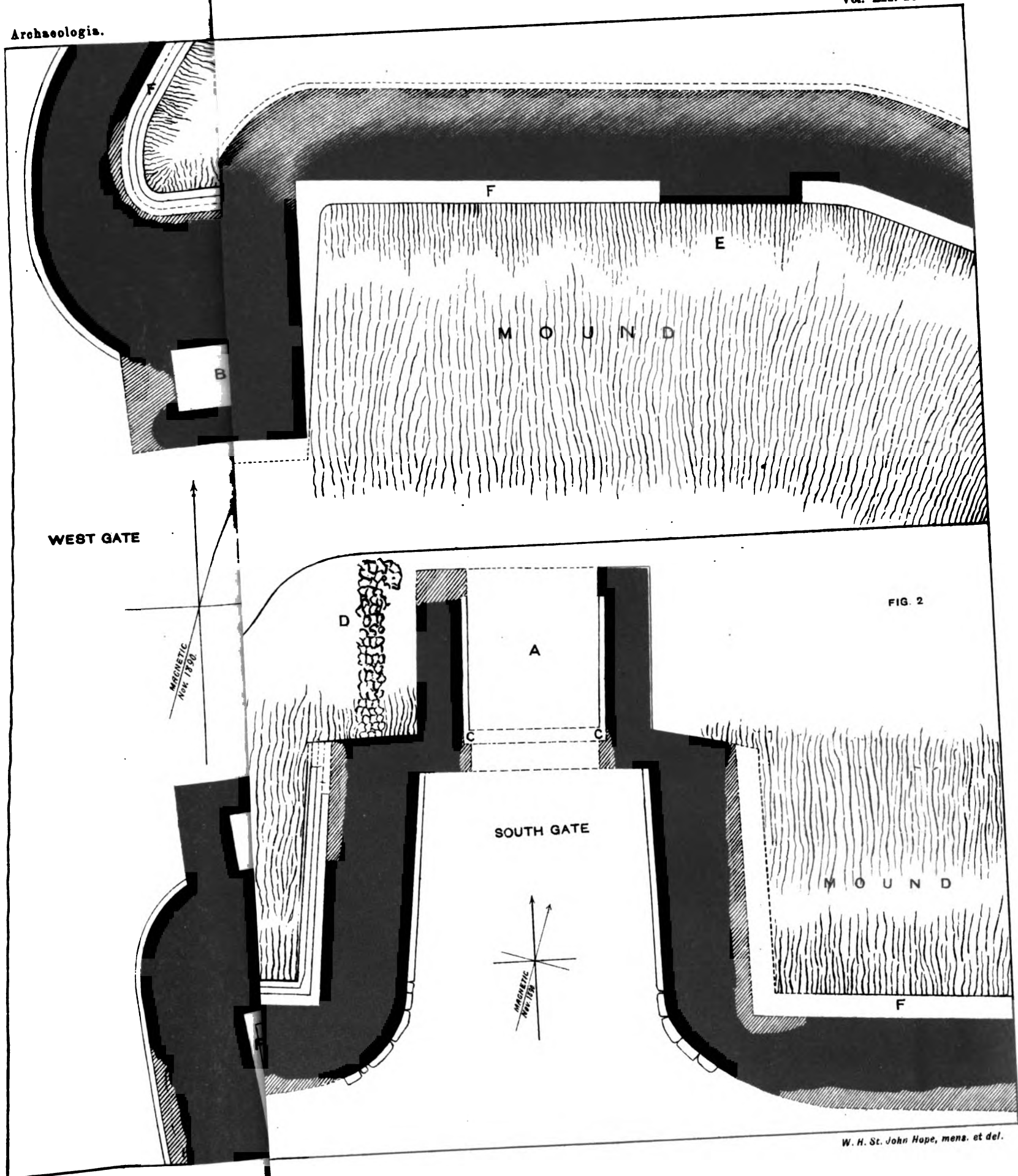


FIG. 2

W. H. St. John Hope, mens. et del.

a landing at the top; this would enable the rampart walk to be carried over the gate. Only the west side could be examined, and it is therefore uncertain whether the same feature occurs on the other side. Some such arrangement must have been necessary on both sides to afford a means of communication.

The whole character of this gate seems to be inferior to that on the north; the flanking walls being built with smaller material, and the gateway has the defect already noticed. The quantity of ironstone used in the construction was also very much less.

Although the traces of it are not so plain, it is clear that the south gate also had a wooden threshold.

In both the north and south gates the roadway appears to have been formed of a layer of flints 12 inches thick, and the flanking walls seemed to rest on the same bedding. The upper surface of the road was gravelled, resembling in that respect the streets of the city.

The north gate has been described as being arched, although no evidence of the fact now remains. That the south gate was so there is interesting proof, for amongst the rubbish removed was turned up a perfect tile, obviously made, from its shape and construction, to serve as a *voussoir* of an arch. It is 17 inches long and 6 inches wide, but its thickness tapers from $1\frac{3}{4}$ inch at the top to $1\frac{1}{8}$ inch at the bottom. (Plate XXXII. fig. 4). It has also clearly been used in an arch, for the top and back edges and the two sides shew traces of mortar, while the front and bottom are quite clean.

From its width this must be looked upon as a half-tile only, and if the whole tiles were 12 inches across, the whole and half tiles were probably arranged as in the accompanying diagram to form the thickness of the arches of this gate.

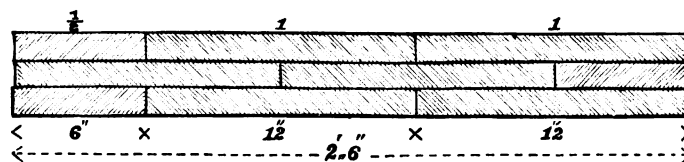


Diagram shewing probable arrangement of tiles forming the arches of the south gate.

When this gate was excavated by Mr. Joyce, he found lying about it six large fragments of cut stone.

The first of these is a square stone (now broken in two) 2 feet 6 inches in length by 2 feet 4 inches in breadth, and varying in thickness from 10 to 15 inches.

A second large flat stone is 3 feet 9 inches long by 2 feet 8 inches wide, and about 12 inches thick. It is picked all over one side, and has a deep groove $\frac{3}{4}$ inch deep, cut across it at 11 inches from one end. The other side is curiously worn into hollows like the rocky bed of a stream.

The third stone is a drum of a column 2 feet $9\frac{1}{2}$ inches in diameter and 1 foot 5 inches in height. This must have come from some temple or other public building in the city, for the position of the lewis-hole on top shows that it forms part of a double column, which could not have stood at the gate.

The fourth and fifth stones are very fragmentary portions of large Doric capitals, one belonging to a column 2 feet 6 inches in diameter at the top. Both capitals have different mouldings.

The sixth stone is a half-capital of the Doric order, fortunately tolerably perfect, which has evidently stood against the wall in an internal angle of some building, as the mouldings of the abacus on one side run into those of the round part in a curious manner. (See Plate XXXII., figs. 1, 2, and 3.) On the opposite side, with certain variations, the whole of the mouldings of the capital seem to have been combined to form a kind of cornice or string course. The entire arrangement is peculiar. The diameter of the capital under the astragal is 2 feet $1\frac{1}{2}$ inches.

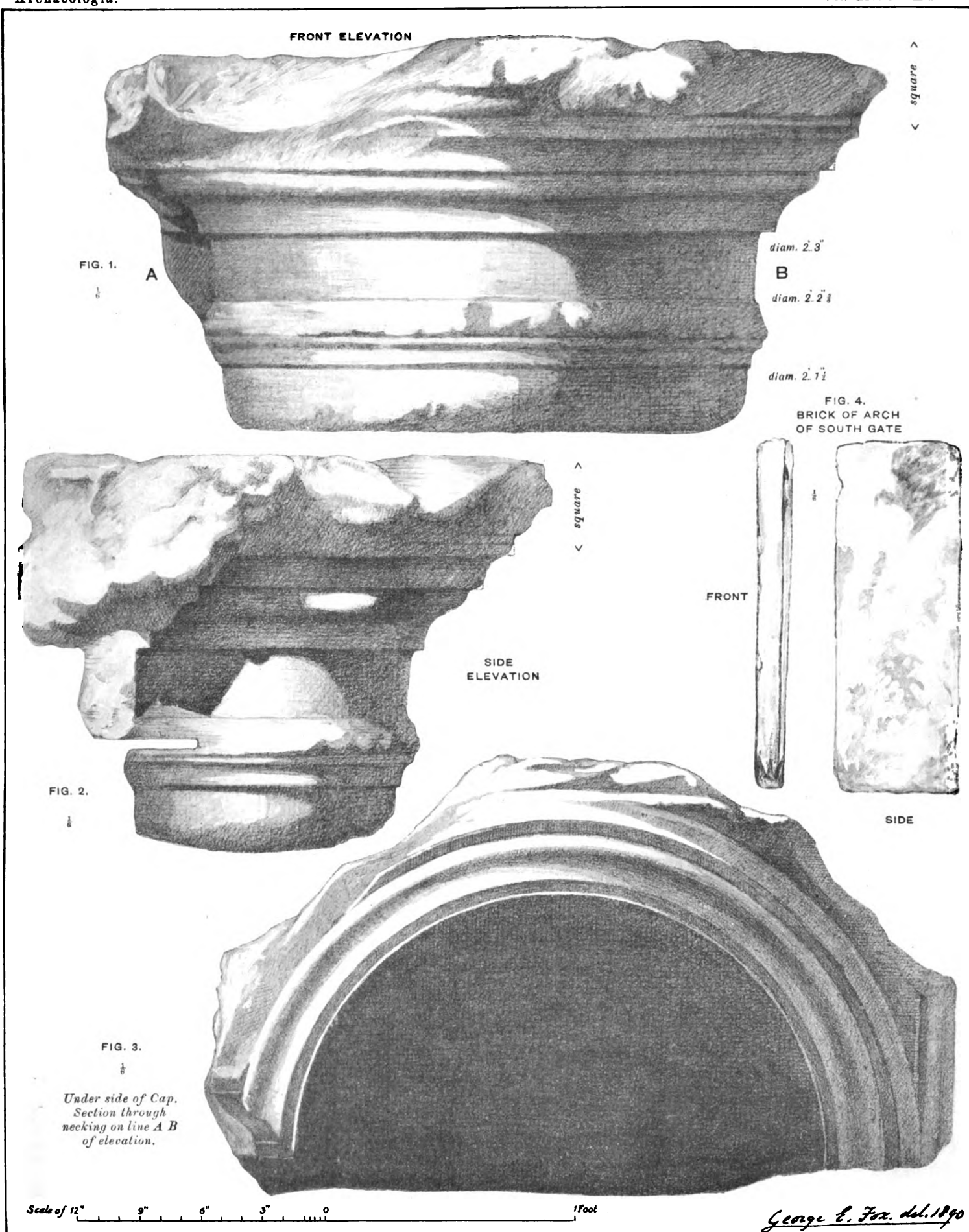
We cannot satisfy ourselves that this very fine capital formed any portion of the gate, although it might have done so as far as dimensions are concerned. There did not, however, appear to be any trace of a foundation or base which could have carried the half-column that it surmounted.

Before leaving the south gate reference should be made to a section cut behind the west flanking-wall through the whole height and breadth of the mound in order to ascertain its nature. Beyond a few fragments of Roman pottery, which could easily have fallen in during the building of the wall, nothing was found to throw light on the age of the mound. To really ascertain this other and far larger sections must be cut elsewhere.

The west gate differs very much from those on the north and south, both as regards size, plan, and arrangement. (Plate XXXI., fig. 3.)

To begin with, this gate is double instead of single, and the inward turn of the city wall on each side extends only 18 feet from the face of the curtain, or as far as the line of the front of the gate, and does not form any sufficient flanking defence.

When perfect the gate consisted of two parallel passages, each 12 feet long



SILCHESTER. — FRAGMENT OF ATTACHED CAPITAL FOUND AT SOUTH GATE,
AND BRICK OF ARCH.

and 13 feet wide, spanned both in front and in rear by arches 12 feet in width and 2 feet in depth. The two passages were separated by a wall 3 feet thick.

The outer sides of the gate were formed, not of single walls, as in the north and south gates, but of a pair of guard-houses, each 12 feet wide and 24 feet long. On the inner or city side these ranged with the gate, but towards the field they projected like two flanking towers, for which purpose, indeed, they were probably used. The area between these two towers is 29 feet wide and 12 feet deep.

Owing to the considerable thickness of the walls, 4 feet on three sides and 3 feet on the side next the gate, the guard-rooms themselves are very small. The first or outer chamber was only 5 feet wide and 6 feet long, and was entered by a doorway in its east end 3 feet wide. At the other end a similar doorway led to an inner room also 5 feet wide, but $7\frac{1}{2}$ feet long. These inner rooms were probably used as lock-ups for prisoners, while the outer chambers were for the accommodation of the sentries. The arrangements were the same on both sides of the gate, but on the north side nearly everything has been destroyed to form the modern highway which passes through and in part conceals this half of the gate. On the south side we were so fortunate as to uncover considerable remains not only of the guardhouse but of the central wall also. These were built of flint-rubble with an external facing of narrow courses of ironstone alternating with bonding courses of tile, and internally of flint and tile in alternate double bands. The door jambs were entirely of tile, with rebates for timber framing, and the principal quoins were built of stone blocks with tile footings. Nothing was found to show that the passages or guardhouses were vaulted, but the discovery of a piece of a *voussoir* tile (Plate XXXIII., fig. 3) is a clear indication that both entrances were arched back and front.

As the arches of this gate were not so thick as those of the south gate the tiles forming the *voussoirs* would probably be arranged as in the accompanying figure.

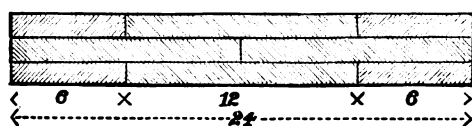


Diagram showing probable arrangement of tiles forming the arches of the west gate.

The arches sprang from boldly-moulded imposts. A large piece of one, of ironstone, rebated on the inside for the door, lay just without the gate. (Plate XXXIII. figs. 1 and 2.)

As in the north and south gates the doors here had wooden thresholds. The places where the outer ends of these rested have been broken away in both passages. The division wall, however, not only has a hole through it for the timbers, but appears also to show how these could be removed and replaced. The hole is covered on both sides of the division wall by a large flat stone, which has dropped somewhat owing to the removal of the stones under it that rested on the ends of the timbers. These stones were probably easily removeable in order to get at the ends of the beams, which could then be slid along and so enable the other ends to be raised and the beam withdrawn. Nothing has been found in the gates of Silchester to show what was equivalent to the stepped stone sills against which the doors shut in the gateways of the camps on the Roman Wall.

The roadway here is of the same construction as at the north and south gates.

The internal walls of the gate, and the north face of the southern guardroom tower, showed faint traces of having been plastered with pink cement. A considerable quantity of this was found lying in the roadway, and strangely enough here also lay a number of circular tiles used for building *pilæ* of hypocausts. These have also been found scattered amongst the rubbish of the gate. There were of course no hypocausts in the gate, and as these tiles were quite clean on both sides, it is difficult to see what they were used for. The guardrooms were plastered internally with a rough coat of plaster, but after a few weeks exposure to the weather this crumbled down. It had been painted, as a fragment turned up having broad pink lines on a white ground. With the exceptions already noted nothing was found to indicate the character of the superstructure of the gate.

Within the southern half of the gate, lay close together two pieces of iron. The first of these (Plate XXXIII., fig. 4) is about one-half of an iron ring or band, $\frac{5}{16}$ inch thick, $1\frac{1}{2}$ inch deep, and originally $3\frac{5}{8}$ inches in internal diameter. It appears to have been an iron band shrunk on to the wooden pivot of one of the doors of the gate, and probably worked in a similar iron ring or shoe let into the wooden threshold. The second piece of iron is a band or strap, $\frac{5}{16}$ inch thick, and $1\frac{1}{8}$ inch deep, and probably formed a strengthening band to one of the doors just above the pivot. (Plate XXXIII. fig. 5.) It is bent round in the form of a long letter U, and from its shape enables us to ascertain that the exact thickness of the doors was 4 inches. Each arm of the band was $13\frac{1}{2}$ inches long, and had three square nail holes in it.

The southern passage of the gate had been blocked with a rude wall composed of uncut masses of carstone and other material. Filling the centre lay

PART OF IMPOST OF CENTRAL PIER. WEST GATE.

FIG. 1.

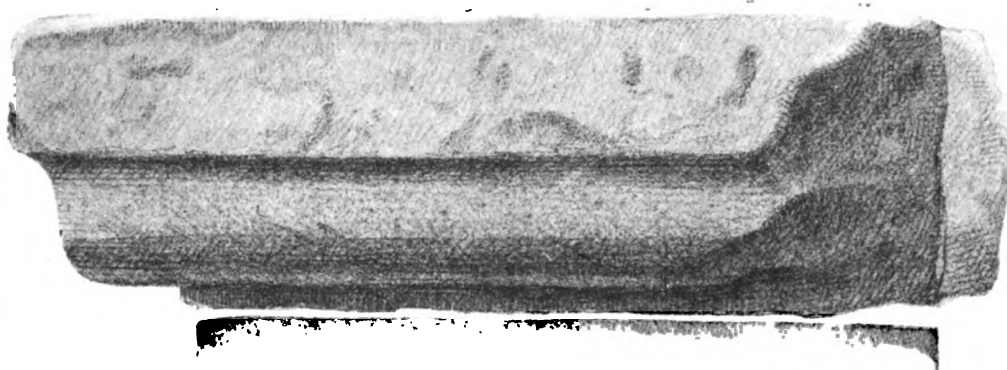
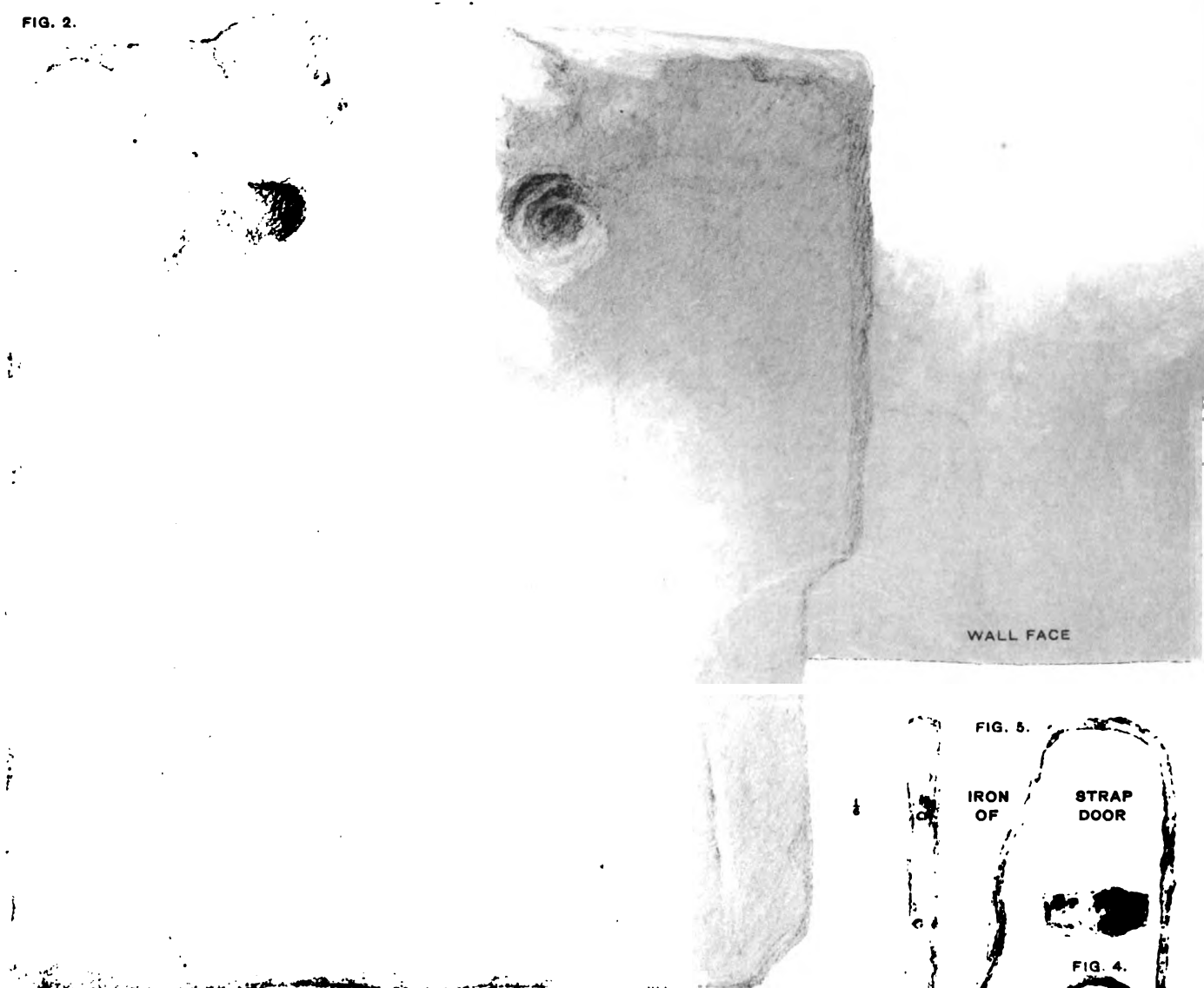


FIG. 3.

PART OF BRICK OF ARCH OF WEST GATE.

FIG. 2.



UPPER SURFACE OF IMPOST SHOWING CRAMP HOLES AND MORTAR BED.

Scale of 12" 9" 6" 3" 0 1Foot

FIG. 5.

IRON OF

STRAP DOOR

FIG. 4.

PIVOT RING

George E. Fox. del. 1890

two wrought stones, clearly brought from some building in the city. The lower was a coping stone, bedded upside down. The upper, which lay upon it, was a thin fragment of a drum of a double column, of the same dimensions and possibly from the same building as the portion found at the south gate; in its upper surface was a lewis-hole. At the same time was unearthed, close to the large piece of the impost moulding already noticed, a fine fragment of a Corinthian capital of considerable size (Plate XXXIV.); it of course did not belong to the gate, as there is no position that it could have occupied.

This blocking of one division of the gate with a rude wall built of fragments has its parallel in what took place in the stations on the great northern barrier. As the power of defence grew less, it was impossible adequately to protect the entrances, and therefore the means of access were restricted in the same way there as seen here. But something more may be learned from this rude blocking at Silchester, namely, that at whatever period it occurred, some of the larger buildings were already in ruins, and afforded a quarry for the inhabitants to draw material from. That period was probably a late one, from the extremely rude character of the masonry.

Among the miscellaneous objects found in and about the gate, were a small stone wrought with delicate mouldings; a bar of iron, possibly part of a lock; a complete padlock and key; a small vessel of black pottery with incised scroll-work, from the inner southern guardchamber; the fragments of a human skull; a bone peg, perhaps for netting; and tiles with various accidentally impressed markings, including one with the imprint of a baby's foot, so clearly stamped upon the clay that even the texture of the skin may be discerned. Only three coins were found; two of them are illegible, and the third is a bronze coin of Constantine.

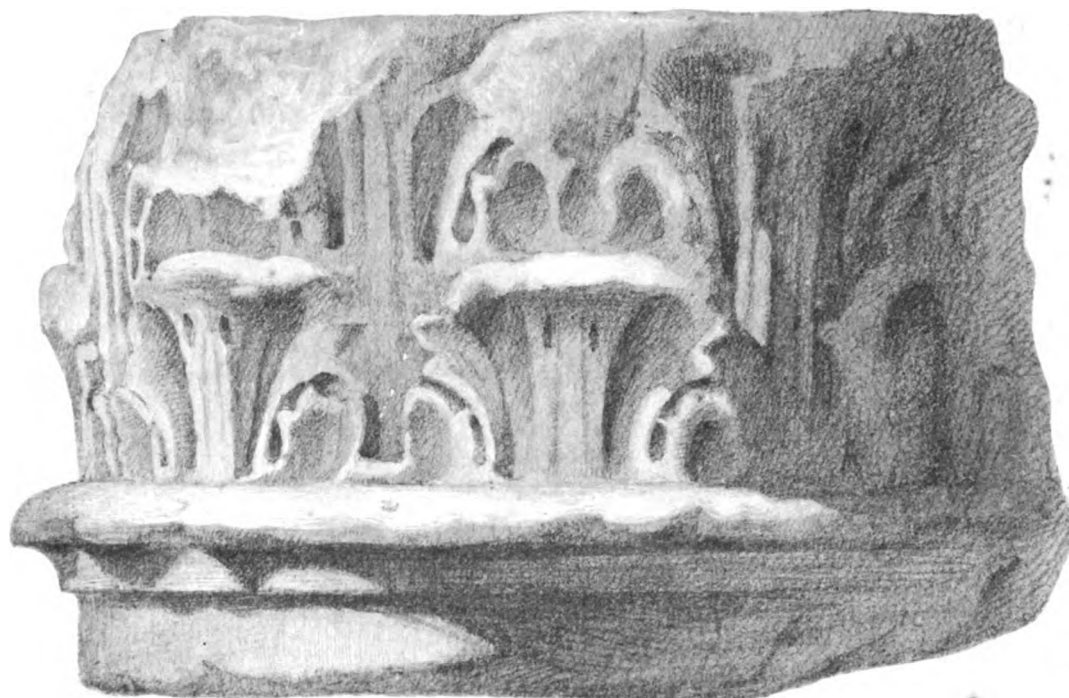
The complete examination of these gates at Silchester is of much greater importance than at first sight appears; for, although little more than their plans and arrangements can be made out, they are the only gates of a Romano-British city that have been thoroughly investigated. They are fortunately free from the disadvantages attending such inhabited sites as Lincoln, Colchester, etc., where buildings and streets are a hindrance to excavation, and we have, therefore, been able to ascertain their exact plans, and their proper relation to the city walls in which they are placed. It is evident from these that the destroyed superstructures of the gates were of the simplest possible character; and, therefore, in seeking for comparisons, it is necessary to look for similar plans. For these we must turn to the stations on the Roman Wall, at any rate as far as the west

gate of Silchester is concerned; for the north and south gates we have as yet been unable to find exactly parallel examples.

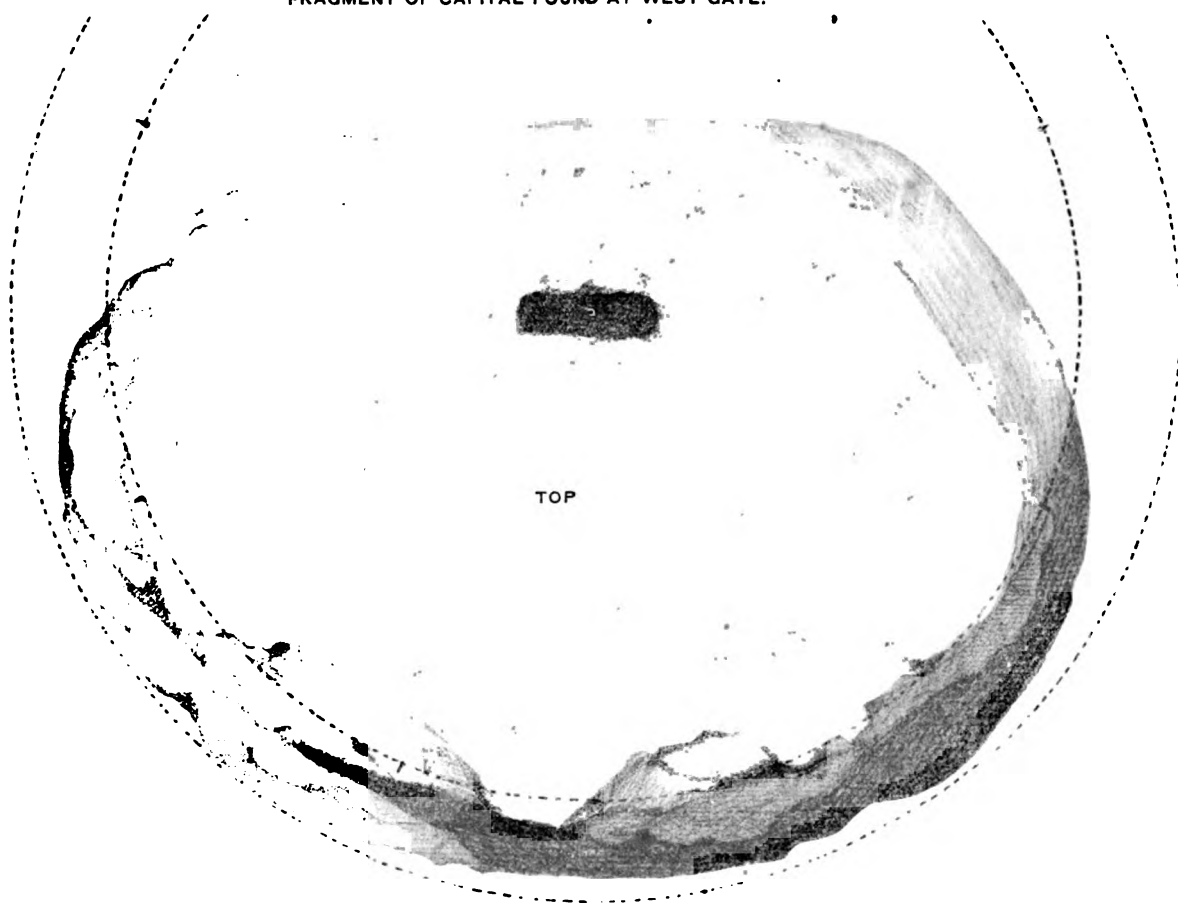
The principal gates of the stations of *Cilurnum* [Chesters] and *Amboglanna* [Birdoswald], two of the largest on the Wall, show an arrangement strikingly similar to the Silchester west gate, the chief differences being the projecting double guard chambers of the southern example, and the way in which the gate is recessed from the curtain wall, by which means the entrance was rendered more defensible.*

The similarity of the gates which has been noticed raises the question of their relative dates. This is a question beset with difficulties, owing to imperfect knowledge of a sufficient number of examples. The date of the camps on the Roman Wall is still a matter of dispute; but, if the latest period assigned to their erection, that of the reign of Hadrian (A.D. 117—138), be taken, it will still be a comparatively early one in the Roman occupation. Whether the west gate of *Calleva* is of an approximate age cannot at present be determined. For some of the stations on the Roman Wall, it must also be remembered, a date has been claimed as early as Agricola.

* The likeness of these gates may be seen by a comparison of the Silchester example with the plan and restored elevation of a gate at Amboglanna, illustrating a paper by Mr. Glasford Potter in *Archaeologia Æliana*, iv. 74.



FRAGMENT OF CAPITAL FOUND AT WEST GATE.



Scale of 12" 9" 6" 3" 0 1 2 Feet

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SILCHESTER. — FRAGMENT OF CORINTHIAN CAPITAL.





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